

Title (en)  
Detection and treatment of schizophrenia

Title (de)  
Nachweis und Behandlung von Schizophrenie

Title (fr)  
Détection et traitement de la schizophrénie

Publication  
**EP 2662453 A3 20140226 (EN)**

Application  
**EP 13003496 A 20080731**

Priority  
• JP 2007214047 A 20070820  
• EP 08792016 A 20080731

Abstract (en)  
[origin: EP2189537A1] The present invention provides a method for diagnosing schizophrenia, and a schizophrenia diagnostic reagent or device for use in the method. The present invention further provides a therapeutic or ameliorating agent for schizophrenia, which is effective for the treatment or amelioration of schizophrenia. The therapeutic or ameliorating agent for schizophrenia contains a carbonyl scavenger or a carbonyl-modified protein formation inhibitor as an active ingredient. The method for diagnosing schizophrenia according to the present invention includes measuring at least one parameter in a subject, the parameter being selected from the group consisting of: (1) a genetic abnormality of glyoxalase I gene; (2) the expression level or activity of glyoxalase I in a biological sample; (3) the amount of a carbonyl compound or a carbonyl-modified protein that is a protein modified with the carbonyl compound; and (4) the amount of pyridoxal in a biological sample.

IPC 8 full level  
**C12Q 1/68** (2006.01); **A61K 31/415** (2006.01); **A61K 31/4152** (2006.01); **A61K 31/437** (2006.01); **A61K 31/4415** (2006.01); **A61K 31/4439** (2006.01); **A61K 45/00** (2006.01); **A61P 25/18** (2006.01); **C12N 15/09** (2006.01); **G01N 30/88** (2006.01); **G01N 33/15** (2006.01)

CPC (source: EP US)  
**A61K 31/415** (2013.01 - EP US); **A61K 31/4152** (2013.01 - EP US); **A61K 31/437** (2013.01 - EP US); **A61K 31/4415** (2013.01 - EP US); **A61K 31/4439** (2013.01 - EP US); **A61P 25/00** (2017.12 - EP); **A61P 25/18** (2017.12 - EP); **A61P 43/00** (2017.12 - EP); **C12Q 1/527** (2013.01 - US); **C12Q 1/686** (2013.01 - US); **C12Q 1/6883** (2013.01 - EP US); **G01N 33/6893** (2013.01 - EP US); **C12Q 2600/106** (2013.01 - EP US); **C12Q 2600/112** (2013.01 - US); **C12Q 2600/136** (2013.01 - EP US); **C12Q 2600/156** (2013.01 - EP US); **C12Q 2600/158** (2013.01 - EP US); **G01N 2333/988** (2013.01 - EP US)

Citation (search report)  
• [Y] EP 1420068 A1 20040519 - JAPAN GOVERNMENT [JP]  
• [Y] WO 02061065 A2 20020808 - VLAAMS INTERUNIV INST BIOTECH [BE], et al  
• [Y] TURNER W J ET AL: "Genetic markers for schizotaxia", BIOLOGICAL PSYCHIATRY, ELSEVIER SCIENCE, NEW YORK, NY; US, vol. 14, no. 1, 1 January 1979 (1979-01-01), pages 177 - 206, XP008132140, ISSN: 0006-3223  
• [I] YOUNG ET AL: "Biomarkers of oxidative stress in schizophrenic and control subjects", PROSTAGLANDINS LEUKOTRIENES AND ESSENTIAL FATTY ACIDS, CHURCHILL LIVINGSTONE, EDINBURGH, vol. 76, no. 2, 12 February 2007 (2007-02-12), pages 73 - 85, XP005881850, ISSN: 0952-3278, DOI: 10.1016/J.PLEFA.2006.11.003  
• [Y] OZYURT ET AL: "A preliminary study of the levels of testis oxidative stress parameters after MK-801-induced experimental psychosis model: Protective effects of CAPE", TOXICOLOGY, LIMERICK, IR, vol. 230, no. 1, 12 January 2007 (2007-01-12), pages 83 - 89, XP005828714, ISSN: 0300-483X  
• [Y] PRABAKARAN S ET AL: "Mitochondrial dysfunction in schizophrenia: evidence for compromised brain metabolism and oxidative stress", MOLECULAR PSYCHIATRY, BASINGSTOKE, GB LNKD- DOI:10.1038/SJ.MP.4001532, vol. 9, no. 7, 1 July 2004 (2004-07-01), pages 684 - 697, XP002490229, ISSN: 1359-4184, [retrieved on 20040420]  
• [Y] "Peripheral oxyradical scavenging enzymes in Schizophrenia - Ravinder Reddy, M.D. (by invitation), Sukdeb Mukherjee, M.D., Sahebarao Mahadik, Ph.D. (by invitation), J. Murthy, Ph.D. (by invitation), David B. Schnur, M.D. (by invitation) New York State Psychiatric Institute, New York, NY 10032", 1 May 1990, BIOLOGICAL PSYCHIATRY, ELSEVIER SCIENCE, NEW YORK, NY, US LNKD- DOI:10.1016/0006-3223(90)90221-M, PAGE(S) 106, ISSN: 0006-3223, XP024250226  
• [Y] SUGIYAMA S ET AL: "Plasma levels of pentosidine in diabetic patients: an advanced glycation end product.", JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY : JASN SEP 1998, vol. 9, no. 9, September 1998 (1998-09-01), pages 1681 - 1688, XP002712359, ISSN: 1046-6673  
• [Y] TSUKAHARA HIROKAZU ET AL: "High levels of urinary pentosidine, an advanced glycation end product, in children with acute exacerbation of atopic dermatitis: relationship with oxidative stress.", METABOLISM: CLINICAL AND EXPERIMENTAL DEC 2003, vol. 52, no. 12, December 2003 (2003-12-01), pages 1601 - 1605, XP002712360, ISSN: 0026-0495  
• [Y] MIYATA TOSHIO ET AL: "Glyoxalase I deficiency is associated with an unusual level of advanced glycation end products in a hemodialysis patient", KIDNEY INTERNATIONAL, NATURE PUBLISHING GROUP, LONDON, GB, vol. 60, no. 6, 1 December 2001 (2001-12-01), pages 2351 - 2359, XP002355559, ISSN: 0085-2538, DOI: 10.1046/J.1523-1755.2001.00051.X

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 2189537 A1 20100526; EP 2189537 A4 20100811; EP 2189537 B1 20141008**; CY 1115640 T1 20170104; DK 2189537 T3 20141027; EP 2662453 A2 20131113; EP 2662453 A3 20140226; ES 2515168 T3 20141029; HR P20140993 T1 20141219; JP 2009039088 A 20090226; JP 5288365 B2 20130911; PL 2189537 T3 20150130; PT 2189537 E 20141030; SI 2189537 T1 20141128; US 2011028470 A1 20110203; US 2012065198 A2 20120315; US 2014335517 A1 20141113; US 8809329 B2 20140819; WO 2009025159 A1 20090226

DOCDB simple family (application)  
**EP 08792016 A 20080731**; CY 141100824 T 20141010; DK 08792016 T 20080731; EP 13003496 A 20080731; ES 08792016 T 20080731; HR P20140993 T 20141016; JP 2007214047 A 20070820; JP 2008063803 W 20080731; PL 08792016 T 20080731; PT 08792016 T 20080731; SI 200831305 T 20080731; US 201414325808 A 20140708; US 67401808 A 20080731